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Flightfax®

Online Report of Army Aircraft Mishaps

Indiscipline and failure to conduct quality mission briefings continue as a consistent trend for human error accidents reported in FY12. Our professional Army aviators are the basic element in the command line of aircraft mishap prevention. Superbly trained pilots in command (PC), with total dedication to air discipline with respect to standards, rules and regulations, are more effective than any other known remedy to prevent aviation accidents. Aircrews are the best mitigation factor for preventing human error accidents.

In an era of unprecedented OPTEMPO, our Class A accidents over the last few years have remained at historical and equally unprecedented low rates. Leaders cannot — and should not — be in every cockpit of every flight. This is why we have PCs. Effective PCs use their authority for operating, servicing, and securing the aircraft they pilot, but they do not operate without the participation of other crewmembers. For all of those flights conducted safely, these missions have been successfully managed by an effective PC who ensured safe execution.

In an effort to assist aviation Leaders and Soldiers in breaking the accident chain of human error, this edition of Flightfax re-emphasizes the importance of individual responsibilities of PCs, as well as selecting and training PCs, giving them the appropriate experience to make decisions necessary for mission success and survival of the crew.

The recent accidents highlighted in this issue point to what constitutes an effective PC program. Pilots in command are most effective in conducting missions when they've had recent experience flying instruments or hood if executing a mission in marginal weather conditions, proficient and current in NVGs, and they fully understand written procedures and/or SOPs. Further, from the crew to their Leaders, there exists an understanding that there is no "short" or "easy" mission.

While every aviation Leader understands acceptable risks, we offer this edition as a reminder to help you enhance your existing good practices. First and foremost, pilots must never forget the responsibilities they assume when designated pilot in command. A PC must be knowledgeable and proficient, and that is a responsibility which is shared at the individual, collective, and leadership levels.

Army Safe is Army Strong!

BG William T. Wolf, Commander, USACR/Safety Center

DES Perspective on Army Aviation Trends

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A trend is a change in condition, output, process, direction or form of behavior that develops among a large population over time. Army Aviation is a large enough population to develop its own trends. The Directorate of Evaluation and Standardization (DES) is privileged to have the opportunity to fly, train, teach, mentor and learn from almost every formation in Army Aviation. In our role as assessors of standardization and training for the commanding general, USAACE, DES also gets the opportunity to see Army Aviation trends. DES has definitely observed trends from 10 years of war.

The number one positive trend DES has observed is our aircrew members are mission-focused and ready to fight our nation's wars. We have the honor of assessing Combat Aviation Brigades and aircrews who fly and fight in some of the most inhospitable and austere environments on the planet. The overall assessment of our visits is Army Aviation has great teams ready to fight our nation's wars.

But not everything is ideal. The reason standardization and training is so vital to Army Aviation is the fact that the smallest of mistakes can and has cost the lives of our very best officers and Soldiers. A few of the trends observed are worrisome and could be potentially dangerous. This article will focus on three negative trends observed by DES. The first negative trend DES has observed is the erosion of basic aviator knowledge, training and, sometimes, professionalism. Next is the lack of focus on continuation training, especially in certain critical skills. Last is our observation that many units are reluctant to fully accept and use Heads-up Displays (HUD).

(1) The erosion of basic aviator knowledge and training is often noticed at the very beginning of our visit. We commonly administer a written exam that tests basic aircrew knowledge. Our team has recorded a pass rate of about 80%, or a 20% fail rate. The majority of failures are on emergency procedures (EP) and aircraft limitations. Besides EPs and limits, many aircrew members score poorly on instruments, airspace and their own unit's standard operation procedures questions. The overall problem is one in five aircrew members don't pass, and the typical unit average of those who pass hovers around 80%. Not surprisingly, unit instructor pilots score very well. Units always have several young officers and crew chiefs who receive very high grades on every test. For our non-rated crewmembers, units without an assigned enlisted senior instructor at the battalion level tend to do poorly. Maintenance officers, especially in maintenance companies, have not scored well. An argument could be made that basic knowledge must not be important if we are fighting and winning wars. The truth is many great leaders and instructors with the requisite knowledge trained our crews in the past. It is this high quality training that led to

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our current success. If we allow our focus and desire to maintain the highest standards to wane, we will eventually create a knowledge vacuum where our younger aircrew members will be unable to train our future warfighters.

Our basic solution is a greater focus on fundamental aviation training. As units gain greater dwell time between rotations to Afghanistan, we must take our incredible lessons learned, refocus on aircrew knowledge and aviation training to enable aircrews to fly and fight even better. We want the focus of training to be on gunnery, environmental training, mission planning, sling and hoist operations but tied to those basic aviation skills that enable our crews to correlate ideas and improve airmanship and safety.

Remember, the erosion of the basics is an overall trend. We also see hundreds of super stars that set the standard few have ever achieved. Yet, we also observe leaders in the wrong boots, crew chiefs not receiving flight pay, CW4s who cannot achieve a 70% on a written exam, Soldiers in substandard personal equipment and leaders not meeting their Aircrew Training Program (ATP) requirements. We must all work on stopping these problems.

(2) The lack of focus on continuation training is the next negative trend DES has observed. The ATP is the commander's program for training combat-ready rated and non-rated crewmembers. Army Aviation, in preparation for war, becomes focused on progression training and the demonstration of proficiency of battle-rostered crews. Once the crew is trained, we shift to collective and continuation training. Gunnery, high altitude training and several major collective training events ensure unit and crew readiness prior to deployment. Once these initial training events are complete, units must institute programs to ensure continuation training is conducted throughout the ATP year.

The vital need to focus on mission accomplishment throughout the war has caused, even forced, units to slowly lose focus on the importance of continuation training. The tempo of training, equipping, preparing and fighting the current conflicts has taken time and energy away for assessing and training throughout the year. Solutions can be simple. Small level training conducted by unit leaders, pilots in command and instructor pilots will keep skills honed. Constant efforts to assess training levels by leaders will prevent complacency and lack of focus. Tried and true methods of training such as instrument approaches at the end of a mission; test fires shot as quick, simple, team engagements; table talk discussion of power management will keep skills honed. These methods all require constant reinforcement and leader effort.

Every unit fires Table VIII Gunnery before deployment on aircrews, crew chiefs and door gunners. After arriving in theater, the crews have the opportunity to fire relatively often on test fires, and sometimes even against the enemy. But more rarely are these events turned into training and assessment opportunities. Often engagements against the enemy are not carefully reviewed by master gunners and debriefed to improve proficiency

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and accuracy during subsequent engagements. Continuation training needs to continue year round and at every opportunity, even when deployed.

Environmental and high altitude (power management) training becomes part of a single, often culminating event during pre-deployment training. Our aircrews are asked to absorb and master these skills in a very short period of time. Soon after High Altitude Mountain Environmental Training Strategy (HAMETS) is complete, the training and lessons learned begin to fade. Some units develop excellent programs to ensure high altitude training continues throughout the ATP year, some do not. The same lack of focus on continuation training is often observed with instrument training. We cannot train year round. We must focus on the mission. Our crews are a pivotal part of the mission in Afghanistan. But whenever Army Aviation has the chance, we need to fly an instrument approach at the end of a mission or turn a test fire into a quick training scenario with a short debrief.

(3) The last observation, or trend, is the reluctance of units to fully utilize HUDs. Use of a HUD is the norm for Apache units. Standardization pilots at Fort Rucker and across the Army made the Helmet Display Unit (HDU) the norm during the fielding of the AH-64, and the Apache community has not looked back. Now, UH-60 and CH-47 units are receiving many improvements to their HUDs. These two communities have reached the point where the HUD should be worn on every night flight. The improvements on the CH-47F and UH-60M will soon allow Day, Night and NVG use of the HUD. We must start making the use of HUD mandatory at night. Once the Day HUDs are fielded, units need to wear their HUDs in all modes of flight. The argument that a scan under the NVGs and inside the cockpit is a better method needs to stop. We must learn to fly outside the aircraft, especially during environmentally challenging approaches. During several of our most recent accidents, including an AH-64 accident, the HUDs/HDUs were not worn. Their use could have prevented the severity of the incident, or possibly prevented the accident. Commanders need to continue to push the Army for better HUDs, but mandate the use of the ones we already have.

The leaders of DES are honored to have the opportunity to fly, train, teach, assess and learn from almost every formation in Army Aviation. We see thousands of great aircrews, but want to make Army Aviation even better. We need to refocus our efforts on basic aviation skills and correlate them to bigger understanding in gunnery, instrument and environmental training. We must continue to train and assess throughout the ATP year. Finally, we must use our incredible equipment to the best of their capabilities. HUD is an essential tool to adding situational awareness, keeping eyes outside the cockpit and, hopefully, preventing a future accident. Changing these three trends would make the very best, mission-focused aircrew members even better. Above the best!

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Mishap Review: NVG Multi-ship AASLT

While conducting a hasty air assault under NVG conditions, the CH-47D forward rotor blades contacted rising terrain during an upslope landing. The front rotor disk became unbalanced and desynchronized the rotor system causing significant aircraft damage and four minor injuries.

History of flight

The accident aircraft was part of a nightly two-ship stand-by mission dedicated to tactical operations. The night of the accident, the tactical mission crews began their duty day at 1900L. At 2100L, they were given a mission to conduct an infil and exfil in mountainous terrain 15 miles from their home base. The two CH-47Ds were assigned two AH-64Ds as escort aircraft. The mission brief was conducted at 2230 hours and was determined to be a high risk mission due to red illumination (less than 30 degrees on the horizon) and non-standard Helicopter Landing Zones (NSHLZ). The brigade commander was on site and approved the mission. Following the mission brief, crew briefs were conducted in the company CP followed by aircraft prep and run-ups. The weather forecast was for clear conditions and unlimited visibility. The illumination cycle for the flight at the time of infil was 68% with moon angle low in the sky at 30 degrees.

The flight departed at 2345L with the accident aircraft in the lead position. Upon arrival at the LZ, the PC in the left seat, determined the site would not support both aircraft and decided to continue forward to leave the original LZ open for Chalk 2. The PI, in the right seat and on the controls, proceeded forward identifying a suitable area requiring an upslope landing. At 2358L, during the landing sequence, the Common Missile Warning System (CMWS) dispensed flares and the front rotor struck the terrain. The aircraft rolled to the right with the aft rotor striking the ground. The aircraft rolled back to the left and came to rest upright. The aircraft was extensively damaged and four personnel received minor injuries.

Crewmember experience

The PC, sitting in the left seat, had more than 3000 hours total flight time, 1300 in the

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CH-47D with 950 as an IP/SP. The PI more than 1500 hours total time with 266 in the CH-47D and qualified as a PC in UH-60s and CH-47Ds. The FE, located at the right cabin door had more than 3900 hours, the CE on the ramp had 300 hours and the door gunner in the left cabin window had 89 hours total.

Commentary

The accident board determined that during the upslope landing in the LZ, the pilot on the controls unintentionally activated the CMWS causing numerous flares to deploy creating a distraction during the NVG operation. The PI reacted by displacing the cyclic control forward, resulting in the forward rotor disk contacting the ground. The rotor system became unbalanced and desynchronized, causing significant aircraft damage and four minor injuries. The pressing of the flare dispenser control switch was the result of a negative habit transfer between the UH-60 trim and CH-47D CMWS cyclic switch positions. Additionally, the board noted the crew failed to safe the CMWS IAW the Aircrew Procedures Guide. During the landing sequence, the passengers removed their restraints prior to the completion of the landing without direction from a member of the crew. As a result, they suffered minor injuries when they were tossed about in the cargo area during the crash sequence.

Manned Aircraft Class A – C Mishap Table

	Month	FY 11 Class A Mishaps	FY 11 Class B Mishaps	FY 11 Class C Mishaps	FY 11 Army Fatalities		FY 12 Class A Mishaps	FY 12 Class B Mishaps	FY 12 Class C Mishaps	FY 12 Army Fatalities
1st Qtr	October	0	1	4			2	2	6	1
	November	0	2	14			1	1	9	0
	December	2	1	5	4		2	2	5	4
2nd Qtr	January	0	1	8			2	0	9	0
	February	1	1	2			2	1	6	0
	March	2	1	7			1	2	10	0
3rd Qtr	April	2	1	12			2	1	4	4
	May	2	1	5	1		1	0	2	0
	June	3	1	4	2				1	
4th Qtr	July	1	3	14	2					
	August	2	2	10	2					
	September	0	0	5	0					
	Total for Year	15	15	90	11	Year to Date	13	9	52	9

As of 13 Jun 12

Mishap Review: UH-60 MEDEVAC Chase

Shortly after takeoff on a night MEDEVAC chase mission, the crew of the UH-60L initiated a gradual left- hand turn. The left roll progressed past 90ºand the nose pitched down. The crew was unable to regain control of the aircraft. It struck the ground, fatally injuring all crewmembers.

History of flight

A flight of two UH-60's departed the Forward Operating Base (FOB) at approximately 2125L in support of a 9-line MEDEVAC request. The lead aircraft was the MEDEVAC aircraft and the second (accident) aircraft was a UH-60L performing MEDEVAC chase duties. Approximately one minute after takeoff, with an estimated four miles of visibility, both aircraft lost visual reference with the ground due to low illumination and contrast. The lead aircraft, familiar with the area, looked to a river terrain feature for a contrasting visual reference. Locating the contrasting terrain feature, the lead aircraft regained visual reference with the ground and at the suggestion of the chase aircraft, the crew decided to return to the FOB. The crew of the chase aircraft, unfamiliar with the area, never regained visual reference with the ground. The pilot on the controls initiated a shallow left-hand turn, allowed the aircraft bank angle to progress beyond 90 degrees and the nose to pitch down. The pilot not on the controls recognized the unusual attitude too late for the crew to recover the aircraft. The aircraft struck the ground in a nose low, steep left bank, fatally injuring the four crewmembers. A post-crash fire consumed the wreckage.

Crewmember experience

The PC, sitting in the left seat, had 1000 hours total flight time, 900 in the UH-60 with 239 hours NVG. The PI had 400 hours total time with 323 in the UH-60 and 100 hours NVGs. The CE, occupying the left window, had 1000 hours total time with 146 NVG and the door gunner in the right window 100 hours total time and 36 hours NVG.

Commentary

The accident board determined that under conditions of degraded visibility, low illumination and low contrast terrain, the pilot in command (PC) became spatially disoriented when he unknowingly initiated a gradual left turn that progressively steepened until the aircraft was in a 110 degree left bank with a nose low descent at

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an altitude where a successful recovery was not possible. The aircraft impacted the ground, fatally injured the four crew members and destroyed the aircraft. The PC's lack of recent experience flying instruments and hood as well as limited NVG flight time in the previous few months were considered factors in the accident. Additionally, a lack of crew coordination in areas of communicating positively and offering assistance were noted. The aircrew was accustomed to flying during greater illumination. Therefore, flying during zero illumination over an area of low contrast and definition caused a breakdown in the aircrew's performance which led to the aircrew not positively communicating about the flight conditions or a plan of action to address the conditions. The board also suspected the TTP of flying 10 or more rotor discs separation in the encountered flight conditions made it difficult for the accident PC to maintain visual contact with the lead aircraft, and took his attention away from the flight instruments and basic aircraft control, contributing to his spatial disorientation.

UAS Class A – C Mishap Table

	FY 11 UAS Mishaps					FY 12 UAS Mishaps			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	2		1	3	W/GE	1			1
MQ-5	3		1	4	Hunter	1		1	2
RQ-7	1	14	38	53	Shadow		6	12	18
RQ-11					Raven			1	1
MAV			3	3					
YMQ-18						1			1
SUAV			1	1	SUAV			4	4
Aerostat	6	9		15	Aerostat		3		3
Total Year	12	23	44	79	Year to Date	3	9	18	30

As of 13 Jun 12

So you're a PIC! *Reprinted from Flightfax dated 25 March 1981*

By designating you pilot-in-command, your commander or his authorized representative, has deemed you to be knowledgeable and proficient in the operation of a specific type of aircraft, and capable of shouldering the responsibilities associated with any mission he may assign to you. In effect, he is expressing his confidence in your abilities and placing his trust in you. Unfortunately, PICs sometimes unwittingly betray that trust. The reasons for such betrayal are as varied as they are numerous. And the fault does not lie **only** with the PIC. Often it must be shared with his commander or some other superior.

Consider, for example, the PIC of a UH-1 participating in terrain flight. At an altitude of about 100 feet AGL, the copilot, who was on the controls, made a steep right turn of approximately 75 degrees. The aircraft rapidly lost altitude and struck some trees that were 75 to 85 feet tall. The crew then made a precautionary landing in a nearby clearing and shut down the aircraft.

Investigation revealed that the copilot had placed the aircraft in an excessively steep turn at a low altitude, causing the aircraft to settle rapidly and strike the trees. Additionally, his making a right turn at low altitude from the left seat position probably contributed to his misjudgment of the amount of bank he should have applied in the turn. It was also determined that certain standards and procedures outlined in the ATM, FM 1-1, and the unit SOP were not being followed. For example, although the crew had two area maps available, they had not plotted the actual route of flight on either. So they were not following a preplanned route with all obstacle hazards identified. Further, crew coordination as outlined in the unit SOP was not being followed. The two pilots were not communicating with each other as to obstacles and other terrain hazards. This was evidenced when the copilot made a steep right turn while flying the aircraft from the left seat. First of all, he was not told to make the turn by the PIC who was functioning as the navigator; and secondly, he did not request that the navigator, seated in the right seat, clear him for the turn. In reviewing this mishap, you might wonder why the PIC failed to take any positive action during the flight -- why he failed to be in charge. Could it be that the PIC took no corrective measures nor attempted to caution the copilot as to his handling of the aircraft because the copilot happened to be his platoon leader and the air mission commander?

In another instance, the PIC of a UH-1 may have been the victim of peer pressure when he attempted a maneuver that ended in tragedy. The aircraft involved in this mishap was one of four returning from a mission over rugged, mountainous terrain. The first leg of their return flight was completed. However, while the aircraft were on the ground, weather conditions deteriorated to an extent that instrument takeoffs would have to be made if flight was to be resumed without delay. Although the pilot of the ill-fated aircraft met the qualifications necessary to be designated a PIC, he was relatively inexperienced as compared with other PICs in his unit. Further, instrument takeoffs had been his chief

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weakness during flight training. Yet, while reluctant to try the instrument takeoff over mountainous terrain, he didn't want to delay the flight. At this point, no decision had been made as to whether the flight should be continued or cancelled. The AMC, who was also the PIC of one of the four aircraft, had the option of postponing the flight or replacing the relatively inexperienced PIC with another. However, either decision would cause a delay. So he consulted with the PIC of one of the remaining aircraft. This individual was highly experienced and the senior IP in the unit. After studying the situation and discussing takeoff procedures with the inexperienced PIC, he expressed assurance that an instrument takeoff would pose no problem. As a result, the inexperienced PIC waived his prerogative to stay on the ground and chose to attempt the takeoff. In the process, his aircraft lost altitude and hit a large tree located on a lower ridge. Both pilots were killed and the aircraft destroyed.

In both of the above examples, "pressure" appears to have played a prominent role in the decisions made by the PICs involved. In the first instance, the PIC chose to take no action; in the second, the PIC chose the wrong action. But "pressure" is not a prerequisite for making wrong decisions. The desire to take part in a particular mission, coupled with overconfidence, can similarly produce a lethal combination.

A pilot may be highly experienced and confident in himself. Yet, the selection of a qualified but less experienced pilot as PIC may sometimes be a better choice for a particular mission assignment. In one such case, the pilot selected for a combined reconnaissance and training mission over mountainous terrain was a highly experienced UH-1 IP. Because of his past performance, he was held in high regard by his commander. In addition, he had confidence in his own abilities. The choice appeared to be a logical and good one. With a copilot, crew chief, and five passengers on board, the PIC flew the UH-1 to the assigned landing area where he tried to terminate his approach to a hover at about 15 feet AGL. However, the pressure altitude was more than 8,500 feet. During the hover attempt, the aircraft began to rotate about the mast to the right. This rotation continued even after full left pedal was applied. As rpm started to bleed off, the PIC tried to follow the turn with the cyclic and fly the aircraft downhill. Unfortunately, two large trees stood in his flight path. To avoid them, he lowered collective and tried to land the aircraft on the uneven terrain below. The aircraft hit the ground, rolled to the right, and came to rest almost inverted. All occupants, however, were able to exit without difficulty. Investigation revealed that under the existing conditions of aircraft gross weight, OAT, and pressure altitude, the aircraft was not capable of hovering out of ground effect. The power required for the aircraft to hover under the prevailing conditions was determined to be 44 psi indicated torque. Yet, the maximum power available was only 39.5 psi. In effect, the PIC failed to adequately plan his flight. He did not determine the power required to hover in the landing area, and he failed to adequately consider aircraft performance in establishing standard loads. The reason he failed to properly plan was deemed to be the result of overconfidence in himself and his equipment. Although he was a highly experienced IP, he had participated in only 2 hours of mountain flying during the preceding 2 year period.

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But even when a pilot is fully qualified and current for the mission he is to fly, overconfidence alone can precipitate a mishap. And it doesn't matter whether the pilot is overconfident in himself or in his equipment. For example, an aviation section operations officer assigned himself to fly a UH-1 on a training flight. Actually, the aircraft selected was about 1.5 hours away from a scheduled inspection, and the operations officer wanted to get the inspection completed so the aircraft would be available for a forthcoming mission. With a crew chief aboard, the pilot flew the aircraft at terrain flight altitudes. While flying over a lake, the aircraft hit wires about 40 to 50 feet above the surface and crashed into water that was 12 to 15 feet deep. The crew chief managed to escape but the pilot was killed. It was determined that the pilot performed a course of action prohibited by his unit SOP and FAR 91.79 when he flew his aircraft at terrain flight altitudes off post in a manner that endangered the lives and property of people on the ground. Further, the pilot had proceeded at terrain flight altitudes without appropriate preflight planning, route map reconnaissance, hazards identification, or required crew complement. In violation of his unit SOP, he had performed flight without a copilot aboard, and had failed to indicate on his flight plan the area in which training was to take place. It is also significant to note that the pilot had been previously reprimanded for violating the policy of flying without a copilot. After all the evidence was examined, it was concluded that the pilot's actions resulted from overconfidence in his abilities.

In another example, the PIC of a UH-1 made an approach to a tactical landing site in mountainous terrain. Six occupants were aboard the aircraft which was on a resupply mission. While on final approach at about 25 feet AGL, the aircraft began descending at an excessive rate and the PIC initiated a go-around. As he applied power and entered a right turn, the aircraft hit several trees, causing the 90-degree gearbox and tail boom to separate from the aircraft. The main rotor blades then hit the ground and the main rotor separated from the aircraft. The aircraft then crashed and rolled inverted. The crew and passengers exited the aircraft shortly before a post crash fire destroyed it. Four occupants sustained minimal injuries and two sustained minor injuries. The PIC inadequately performed preflight planning. Although the aircraft was loaded to maximum capacity, the PIC did not compute weight and balance as required by both AR 95-16 and AR 95-1. The PIC also failed to compute power requirements in accordance with the performance charts in the operator's manual. As a result, the aircraft was overgross and exceeded the center-of-gravity limitations. When the aircraft began to fall through on approach to a confined area at approximately 20 knots and 150 feet AGL, the pilot turned downwind (with winds at 12 knots gusting to 20 knots) towards climbing terrain in a go-around attempt. Although the aircraft was not climbing because of the downwind turn combined with the overgross and out-of-c.g. conditions, the PIC maintained 40 psi of torque when 50 psi was available. As a result, the aircraft hit trees, then the ground, after which it caught fire and was destroyed. Inadequate pilot judgment and overconfidence in equipment were prime factors in causing this mishap.

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Blast From The Past continued from previous page

It becomes apparent that overconfidence, whether in one's self or one's equipment, can prove to be a definite threat to safety. Even when below the conscious level, overconfidence can induce the most experienced pilot to disregard regulations, inadequately plan flights and fail to follow proper procedures. Recently, a perfectly "healthy" aircraft was destroyed simply because the PIC neglected to coordinate with his crew as to their specific responsibilities during flight. Even though no real emergency arose, a lack of communication between the PIC and his copilot resulted in antics that are reminiscent of the "Keystone Cops" or some other more modern specialists in situation comedy. Unfortunately, there is no humor to be found in the destruction of a $618,000 aircraft even though the occupants managed to escape virtually unscathed.

It happened like this: The PIC of a UH-1 was assigned a service mission to fly to an airfield, pick up five passengers, and return. After all preliminaries had been completed, the PIC embarked on the mission with copilot and crew chief on board. The flight to the airfield was uneventful. Following refueling, passengers and crew boarded the aircraft for the return flight. After climbing to an altitude of approximately 4,000 feet MSL, the PIC chose to cruise with the N2 set at about 6400 rpm to allegedly conserve fuel. Why he felt this action necessary is not clear. The aircraft had just refueled and the mission required flight of less than 1 hour to complete. Nevertheless, this was the PIC's decision – a decision that would later spark events which, in turn, would lead to the mishap.

As the aircraft neared the airfield, a layer of clouds hid the ground below. When the aircraft was about 10 miles from the airfield, the PIC initiated a GCA and the aircraft entered the layer of clouds at about 1,800 feet MSL. At about 900 feet MSL – while still in the clouds – the crew got an audio/visual indication of low engine and rotor rpm. A check of the instruments showed N2 had decreased to 6000 rpm and rotor was down to 300 (needles joined). Promptly, the PIC began to remedy what he thought was a simple beeped down N2 condition. With the throttle in the full on position, he lowered collective. Meanwhile, the copilot misinterpreted the indication as a low side governor failure. Without telling the PIC, he switched the governor to the emergency position. This produced a severe overspeed that demanded immediate remedial action. The PIC responded by adding collective and rolling off throttle in an attempt to compensate for the overspeed. However, while these events were taking place, the copilot reconsidered his decision to position the governor switch to emergency and decided that maybe he should not have done that. So he returned it to the auto position – again without telling the PIC. In the resulting confusion, engine and rotor rpm decreased, finally stabilizing at 6000 and 300 rpm respectively. The PIC lowered the collective and began a turn to a forced landing area. Approximately 20 to 30 feet AGL, he decelerated but did not apply power until ground contact was made. The aircraft then bounced into the air, struck the ground a second time, bounced in the air again, and finally settled to the ground in an upright position. All occupants escaped with minimal injuries, but the aircraft was destroyed. And all the while, the aircraft was healthy and responding to all control inputs exactly as it was supposed to.

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Even from the few mishap briefs related, you can see that the human element plays a predominant role in most mishaps. Unfortunately, the human element is the most difficult one to control. We can beef up a piece of structure we find to be weak, but we cannot make decisions for another or regulate his actions. If a pilot is bent on breaking the "rules," there is little we can do to prevent him from violating ARs and SOPs. At best, we can only reprimand him or resort to more strenuous punitive measures as the situation may demand. But even these actions can only be taken after the fact. So any effective solution to this problem requires the cooperation and active participation of both commanders and PICs. First and foremost, the pilot must never forget the responsibilities he assumes when he is designated PIC. Not only is his own safety affected, but also that of any other occupants who may be aboard his aircraft. And depending on the nature of his mission, additional lives may be at stake if the flight cannot be successfully completed.

Obviously, the need for professionalism is not merely desirable but mandatory. The PIC must be thorough in the performance of all his duties. These responsibilities include flight planning, preflighting the aircraft, performing engine operational and cockpit checks, and briefing crewmembers as well as any passengers. And it goes without saying that ARs and SOPs must be obeyed. Finally, there are those questions only the PIC can accurately answer. These concern his physical and emotional well being. Is he in good health? Rested? And what about his capabilities? Sure, he has met the qualifications required of a PIC. But what about the specific mission he is to fly? Is he current and proficient in all areas of flight operations associated with the mission? In the final analysis, the PIC must be willing to exercise his prerogative not to embark on a flight he feels will exceed his capabilities. Similarly, the unit commander must be careful to exercise his best judgment when appointing PICs. Failure to do so can relegate Army aviation to the Vietnam era when the designation "aircraft commander" was in vogue. This title somehow carried with it the assumption that the individual on whom it was bestowed was fully qualified and capable of performing all tasks and operations associated with any mission he might be assigned to fly in a particular type of aircraft. All too often, ACs embarked on missions that demanded performance beyond their abilities. And all too often, the results were catastrophic. The following excerpt taken from a recent mishap report sums it up best:

"AR95-1 states the commander will designate a pilot-in-command before each flight or series of flights. Blanket pilot-in-command designation, by type aircraft, conveys an expression of confidence by the commander that the individual is fully qualified and capable of performing any mission with any crew configuration in the specified aircraft. This conveyance of confidence could have the psychological effect of motivating aviators to unknowingly exceed the limits of their ability. Blanket designations also have a tendency to downgrade the supervisor's role and negate the emphasis that should be placed on the selection of pilots-in-command. Such selection should only be made after an analysis of the nature of the particular mission, its difficulty and complexity, has ascertained the experience level requirements the crew must meet."

Selected Aircraft Mishap Briefs

Information based on Preliminary reports of aircraft mishaps reported in May 2012.

Utility helicopters

UH-60 

-L series. Aircraft crashed conducting a pinnacle landing. Two injuries. (Class A)

Fixed wing aircraft

C-12 

-R series. Aircraft experienced a severe updraft/microburst during ILS landing. During recovery, both engines sustained overspeed conditions. (Class C)

-U series. Crew experienced hail while vectoring around storm activity. Post-flight inspection revealed skin damage to the nose and leading edge of both wings. (Class C)

Unmanned Aircraft Systems

RQ-7B 

-System failed to climb to prescribed altitude upon launch. Recovery chute deployed when UA descended below 400 ft AGL. Vehicle recovered with damage. (Class C)

-Engine failed just prior to touchdown for landing. UA veered off the runway and sustained damage to the arresting gear and stake. (Class C)

Readers - Get an inside look into the latest technology in Army Aviation, including the Apache Block III and manned-unmanned teaming. View the Game Changer video at:

http://www.pentagonchannel.mil/recon

If you have comments, input, or contributions to Flightfax, feel free to contact the Aviation Directorate, U.S. Army Combat Readiness/Safety Center at com (334) 255-3530; DSN 558

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